

CLAIMS

1. An image sensor test system bringing input/output terminals of an image sensor into contact with a contact of a test head, emitting light to a light receiving surface of said image sensor from a light source and, while doing so, inputting/outputting electrical signals between the contact of said test head and said image sensor so as to test the optical properties of said image sensor,

said image sensor test system provided with at least a pre-test sensor stacker for storing image sensors before testing,

a loader use inverting means for inverting an image sensor supplied from said pre-test stacker,

a contact arm for picking up and moving an inverted state image sensor inverted by said loader use inverting means and bringing input/output terminals of the inverted state image sensor into electrical contact with a contact of said test head,

an unloader use inverting means for inverting an image sensor finished being tested, and

a plurality of post-test sensor stackers for storing tested image sensors inverted by said unloader use inverting means.

2. An image sensor test system as set forth in claim 1, wherein each of said loader use inverting means and said unloader use inverting means can simultaneously invert two or more image sensors.

3. An image sensor test system as set forth in claim 1 or 2, wherein each of said loader use inverting means and

said unloader use inverting means has at least a first holder able to hold an image sensor and a rotation mechanism for making said first holder rotate.

4. An image sensor test system as set forth in claim 3, wherein said first holder has a suction nozzle able to hold an image sensor by suction.

5. An image sensor test system as set forth in claim 4, wherein said first holder is exchangeable with another first holder having a suction nozzle different from the suction nozzle of that first holder so as to match with the size or shape of said image sensor.

6. An image sensor test system as set forth in any one of claims 3 to 5, wherein said rotation mechanism has a pinion gear supporting said first holder and a rack gear intermeshing with said pinion gear and converts linear force supplied to said rack gear to rotational force so as to make said first holder rotate.

7. An image sensor test system as set forth in any one of claims 3 to 6, wherein

each of said loader use inverting means and said unloader use inverting means further has a second holder able to hold an image sensor after inversion and

said second holder is formed with a recess able to hold said image sensor.

8. An image sensor test system as set forth in claim 7, wherein said second holder is exchangeable with another second holder formed with a recess different from the recess formed in that second holder so as to match with the size or shape of said image sensor.

9. An image sensor test system as set forth in any one of claims 1 to 8, further provided with an imaging means able to obtain an image of a back surface of said image sensor after being inverted by said loader use inverting means and before being supplied to said test head.

10. An image sensor test system as set forth in claim 9, further provided with a judging means for judging an emission pattern of light emitting from said light source and an input pattern of electrical signals input from a contact of said test head based on image information obtained by said imaging means.

11. An image sensor test system as set forth in claim 9 or 10, further provided with selecting means for selecting a tested sensor stacker for unloading said image sensor to from among said plurality of tested sensor stackers based on device type information obtained by said imaging means and classification information of the test results.

12. A test method for an image sensor which brings input/output terminals of an image sensor into contact with a contact of a test head, emits light to a light receiving surface of said image sensor from a light source, and, while doing so, inputs and outputs electrical signals between the contact of said test head and said image sensor so as to test the optical properties of said image sensor, comprising at least

a first inversion step of inverting an image sensor before testing,

a test step of bringing the inverted state image sensor into electrical contact with a contact of said test

head and emitting light on a light receiving surface of that image sensor from a light source to test the optical properties of that image sensor, and

a second inversion step of inverting the tested inverted state image sensor.

13. A test method for an image sensor as set forth in claim 12, holding and simultaneously inverting two or more image sensors in said first inversion step and said second inversion step.

14. A test method for an image sensor as set forth in claim 12 or 13, further comprising, before said test step, an imaging step of obtaining an image of an image sensor to obtain device type information.

15. A test method for an image sensor as set forth in claim 14, further comprising a judgment step of judging an emission pattern of light emitted from said light source and an input pattern of electrical signals input from a contact of said test head based on the device type information obtained at said imaging step and,

in said test step, emitting light to the light receiving surface of said image sensor in accordance with said emission pattern and inputting and outputting electrical signals between the contact of said test head and said image sensor in accordance with said input pattern.

16. A test method for an image sensor as set forth in claim 14 or 15, further comprising sorting tested image sensors based on the device type information obtained at said imaging step and classification information of the test results.

17. An electronic device test system bringing

input/output terminals of an electronic device under test into electrical contact with a contact of a test head and inputting/outputting electrical signals between the contact of said test head and said electronic device so as to test said electronic device,

said electronic device test system provided with at least

a pre-test electronic device stacker for storing electronic devices before testing,

a loader use inverting means for inverting an electronic device supplied from said pre-test electronic device stacker,

a contact arm for picking up and moving an inverted state electronic device inverted by said loader use inverting means and bringing input/output terminals of the inverted state electronic device into electrical contact with a contact of said test head,

an unloader use inverting means for inverting an electronic device finished being tested to its original state, and

a plurality of post-test electronic device stackers for storing tested electronic devices inverted by said unloader use inverting means.